

Date: Tuesday, 07/04/2009 10:21:44 AM
 User: Julie Dawson

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : FWD TUBE ASSEMBLY
Job Number : 46981	
Estimate Number : 10467	
P.O. Number :	Part Number : D3391021
This Issue : 07/04/2009 S.O. No. :	Drawing Number : D3391 REV H
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : SKIDTUBES	Drawing Revision : H
Previous Run : 46980	Material :
Written By :	Due Date : 27/04/2009 Qty: 1 Um: Each
Checked & Approved By : <u>JUD 09.04.07</u>	
Comment :	
Est. A 05.09.13 New issue KJ/JLM	
Est. B 06.02.10 Dwg rev.D ecn 773 EC	
Est. C 06.05.02 Added inspections EC	
est D 07.03.13 rev F dwg EC	
est E 07.11.07 revG dwg ecn1053P EC verified by: DD	
Est Rev:f ECN 1056 07-11-12 DD verified by: EC	
Est Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC	
Est Rev:H 08-09-10 revH as per dwg DD verified by:EC	
Est Rev J 09.02.02 added hardware EC verified by: DD	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D6013047	Skidtube Material
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

SKIDTUBE MAT'L

Pick:

Qty	Part Number	Description
1	D6013-047	Extrusion

Batch

23935RT 09-04-13

2.0	SKIDTUBES 1	SKIDTUBESS RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

Cut extrusion to 46.52 +0.010 -0.020

RT 09-04-14

3.0	BENDING	BENDING MACHINE - SKIDTUBES
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**Comment:** Nc bender

Bend as per Dwg D3391 Using Bend Prog 3391021

RT 09-04-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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---------	-----------------------	---------------

4.0

QC5

INSPECT WORK TO CURRENT STEP



$h = 7.00"$
 $L = 13.5"$



Comment: INSPECT WORK TO CURRENT STEP

8 09/04/14 (20)

5.0

HAAS1

HAAS CNC VERTICAL MACHINING #1



Comment: HAAS CNC VERTICAL MACHINING #1

1-Machine as per Folio FA590 Rev. F & Dwg D3391 Rev. H
Identify as D3391-1

2-Deburr

M.A 09/04/26

6.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

M.A 09/04/26

7.0

MILLING CONV.

CONVENTIONAL MILLING MACHINE



Comment: CONVENTIONAL MILLING MACHINE

Drill X1 Aft cap as per Dwg D3391 .1875" dia.

SA 09/04/27

8.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

SA 09/05/25

9.0

QC8

SECOND CHECK



Comment: SECOND CHECK

8 09/04/28 (1)

10.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Drill float bag holes as per Dwg D3391 using DT8798(Do not open tow cap holes to finish size)
(ONLY DRILL HOLES MARKED "A")

2-Drill Remaining two holes for tow cap using DT 8819 Locating off of .1875" holes drilled in previous step

3-Open tow cap holes to .208" as per Dwg D3391

4-Open Tow Ring hole to .640" as per Dwg D3391

5- open float bag holes 0.328" and counter sink as per dwg D3391

M
9-4-39

W/O:		WORK ORDER CHANGES					
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Part Number: D3391021

Job Number:



Seq. #:

Machine Or Operation:

Description :

6-Deburr & Scribe Batch number Inside aft end.

7-Transfer drill D3391-021 with D3391-023

) M 9-4-30

11.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

809/05/07 @

12.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Acid etch and Alodine as per QSI 005 4.1

2 M 9-5-7

13.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

85 09-05-07

14.0

D36704200

SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

SPACER

batch:

046106 3D

M 9-5-7

15.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-instal spacers as per dwg D3391

A/R Magnabond 6398 batch:

exp. date: 10-3-1

cure time 12hrs. as per QSI015

M 111249

M 9-5-7

2- grind crossbolt flush

3-back drill crossbolt if necessary

) M 9-5-12

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

20505-12 (1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Job Number:



Seq. #: Machine Or Operation: Description :

17.0 POWDER COATING POWDER COATING



M111472



Comment: POWDER COATING Pressure wash
Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

BP/MD 09/05/20

START TIME:

7:50

OVEN TEMPERATURE:

300

FINISH TIME:

8:20

BP/MD 09/05/21 (X1)

18.0 QC3 INSPECT POWDER COAT/CHEMICAL CONVERSION



41



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

09-05-21

(X1)

19.0 D3401041 Tow Cap Assembly



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
Tow Cap Assembly

B46029

41

20.0 D356413 Wearshoe



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
Wearshoe

B46183

41

21.0 D356613 Gasket



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)
Gasket

B47435

41

22.0 D36721 Phenolic Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)
Phenolic Washer

B412329

41

23.0 AN3C4A BOLT



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)
BOLT

B111668

41

09-05-21

(X1)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Part Number: D3391021

Job Number:



Seq. #:

Machine Or Operation:

Description :

24.0

AN960C10L

washer



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)
washer M 111668 JU

25.0

ALS41032130

Insert



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)
INSERT M 110511 JU

26.0

ALS41032225

Insert



Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)
INSERT M 110768 JU

27.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1
Identify and Stock
Location: B47066 JU

28.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: SKIDTUBESS RESOURCE 1
**** install D3591-1 spacer as per DSI9364 ****

29.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



#24.1 inspect QCS Sols/bk

U 09.0522

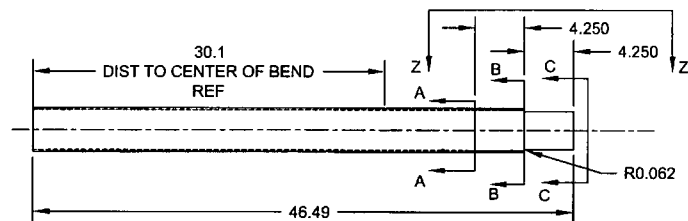
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

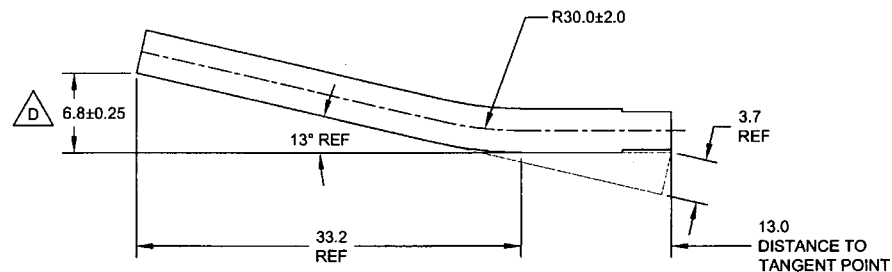
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NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

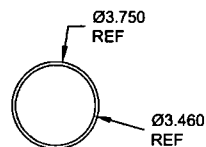
NOTE: Date & initial all entries



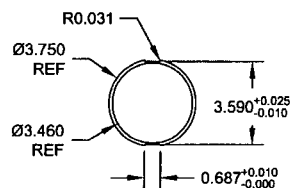
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



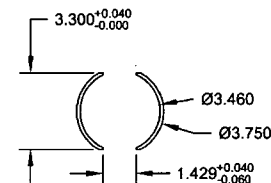
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



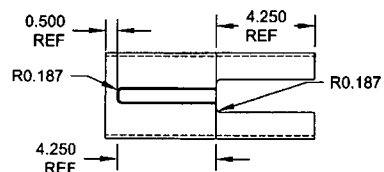
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X




SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

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NO. 4687



C



A

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
2 X	2	AELS-1032-130	INSERT
10	10	AELS-1032-225	INSERT



C



A



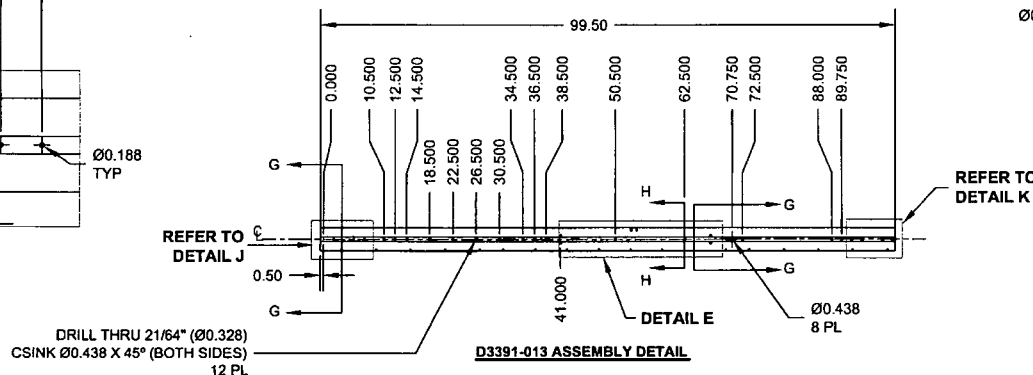
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MFG. APPR.	<i>[Signature]</i>	D3391	SHEET 4 OF 4
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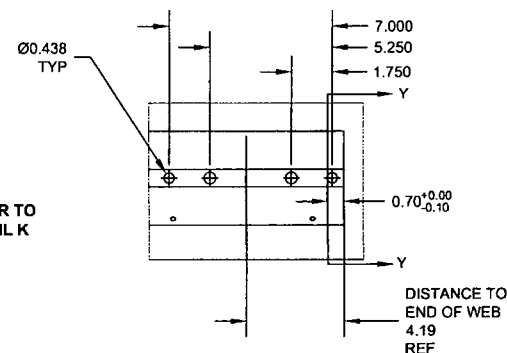
SHOP COPY
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 TO MANAGEMENT
 MATERIALS
 10/10/81
 NO. 10

DISTANCE TO
FWD END OF
D3389-1 WEB
4.94

DETAIL J
SCALE 4X



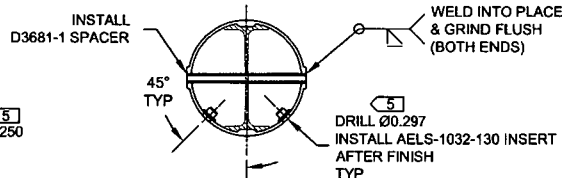
D3391-013 ASSEMBLY DETAIL



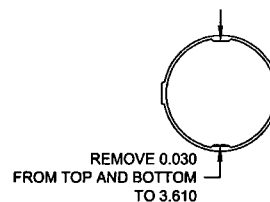
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SCALE 4X



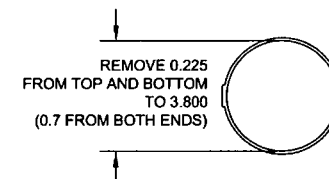
SECTION G-G
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SECTION H-H 12 PL
SCALE 5X



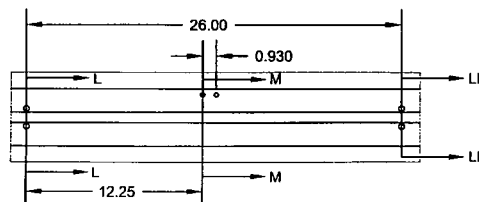
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SCALE 5X



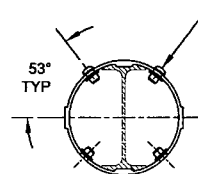
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SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

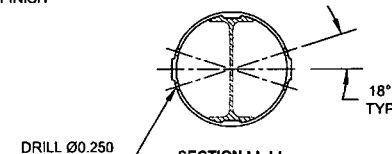
QTY -013	PART NUMBER	DESCRIPTION
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-1	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



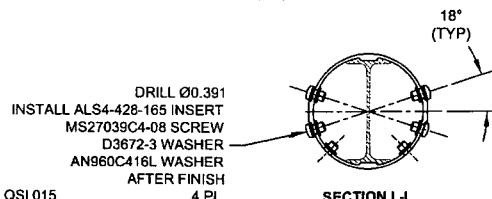
DETAIL E
SCALE NONE



SECTION M-M
SCALE 5X



SECTION LL-LL
SCALE 5X

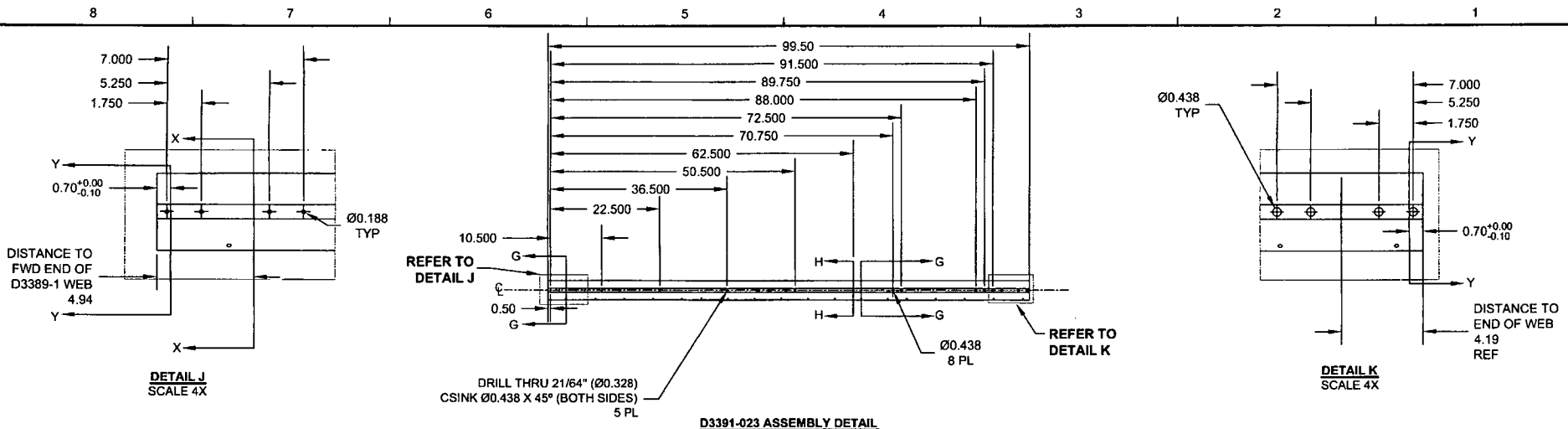


SECTION L-L
SCALE 5X

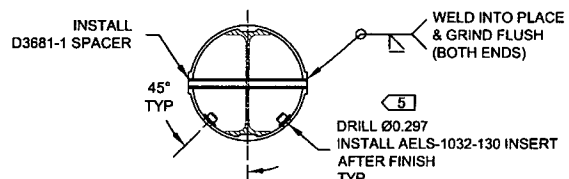
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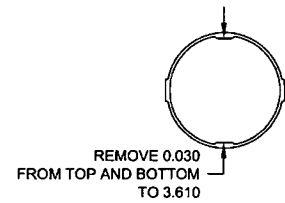
NO. 420281
WORK ORDER
D33891-013 MID TUBE AS
MATERIAL: MAKE
INSTALL D33891
WELDING: PER D
COPY
RETURN TO
SERVING
FILLED COPY
Y
FACTORY AMENDMENT
WITHIN 30 DAYS
NOTICE



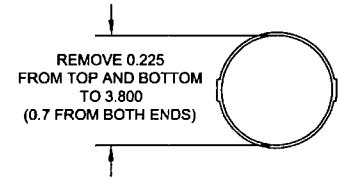
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 035
- 3) WELDING: PER DART QSI 004

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08-05-14

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